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Abstract

This study assesses the relationship between globalisation and the economic participation of women (EPW) in 47 Sub-Saharan African countries for the period 1990-2013. Two indicators are used to measure EPW, namely, the: female labour force participation and employment rates. The empirical evidence is based on Panel-corrected Standard Errors and Fixed Effects regressions. The findings show that the positive effect of the overall globalisation index on EPW is dampened by its political component and driven by its economic and social components, with a higher positive magnitude from the former or economic globalisation. For the most part, the findings are robust to the control for several structural and institutional characteristics: varying conditioning information sets, changes in the growth of urban population, government consumption, legal systems, resource wealth, health, technological advancement, political strife and conflicts, income levels and levels of industrialisation. An extended analysis by unbundling globalisation shows that the positive incidence of social globalisation is driven by information flow (compared to personal contact and cultural proximity) while the positive effect of economic globalisation is driven by actual flows (relative to restrictions). Policy implications are discussed.

JEL Classification: E60; F40; F59; D60; O55
Keywords: Globalisation; inequality; inclusive development; Africa

1. Introduction

Three main strands in contemporary development literature motivate this inquiry, notably: (i) the low participation of the female gender in the labour market; (ii) the contemporary relevance of making globalisation more inclusive and (iii) sustainable development challenges in terms of employment and inclusive development in Africa.

Firstly, on the low participation of women in formal economic sectors, while women have traditionally been the most vulnerable group in the labour market, such vulnerability is comparatively most relevant in Africa (see Efobi et al., 2016)[1]. According to the narrative, the female is for the most part, absorbed in informal economic sectors, notably: by engaging in small scale sole business proprietorships and smallholding farming activities (Ellis et al., 2007; FAO, 2011; Tandon & Wegerif, 2013; Ramani et al., 2013).

Secondly, no consensus has yet been reached in the literature on the effect of globalization on development outcomes. Accordingly, while economic and financial instabilities have been documented to be the outcome of increasing globalization and liberalization, there are also some accounts in the literature on the positive rewards of globalization, notably: in terms of international risk-sharing and allocation efficiency in resources (Kose et al., 2006, 2011; Price & Elu, 2014; Asongu & Nwachukwu, 2017a). In essence, according to Azzimonti et al. (2014), the development literature has been articulated along two main lines in the past thirty years: growing globalization and increasing inequality. In essence, over the past decades, non-inclusive development has been particularly concerning in both developed (Atkinson et al., 2011; Piketty, 2014) and developing (Mlachila et al., 2014; Mthuli et al., 2014) countries.

Thirdly, in the post-2015 sustainable development agenda, a particularly relevant issue is 'growing inequality' owing to increasing globalization (see UN, 2013). According to the narrative, whereas globalization is an ineluctable phenomenon that promises to alleviate developing countries of socio-economic stringencies, it also threatens to disfigure the human face because it endangers the prosperity of nations and people by *inter alia* advocating for: self-interest over altruism and market power over governments (Asongu, 2013a). Therefore, it is not very surprising that in certain developing countries, public support for the phenomenon is decreasing, with explorations of alternatives to the negative consequences of

[1] The term vulnerable is employed because of concerns that may limit access to mainstream economic systems by specific factions of the population. These concerns include: traditions, customs and other issues of structural nature.

the capitalism-driven globalisation (Asongu, 2013a; Kenneth & Himes, 2008; Stiglitz, 2007; Asongu & Nwachukwu, 2016a).

In addition to above points, an inquiry into the importance of globalisation in the economic participation of women in Africa is even more relevant because unemployment is one of the most challenging present and future policy syndromes in the continent. Accordingly, the contemporary world is experiencing the most significant demographic challenge and Africa is at the centre of it. The population of the continent is projected to double by 2036 and represent about 20% of the world's population by 2050 (UN, 2009; Asongu, 2013b; AERC, 2014; Brixiova et al., 2015). Given the apparent discrimination against women in Africa (Elu & Loubert, 2013), the underlying unemployment should logically be more apparent in the female gender.

The policy relevance of the study builds on the fact that the conception, definition and measurement of female economic participation employed as the outcome indicator is in line with at least six of the seventeen Sustainable Development Goals (SDGs), namely: Goal 1 ('end poverty in all its forms everywhere'), Goal 2 ('end hunger, achieve food security and improved nutrition and promote sustainable agriculture'); Goal 3 ('ensure healthy lives and promote well-being for all ages'); Goal 4 ('ensure inclusive and equitable quality education and promote lifelong learning opportunities for all'); Goal 8 ('promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all') and Goal 10 (reduce inequality within and among countries) (see Asongu & Le Roux, 2016). In this study, female economic participation is measured with female labour force participation and employment rates whereas globalisation is measured in terms of economic, social and political globalisation dynamics.

The rest of the study is structured as follows. Section 2 discusses the theoretical underpinning and related literature. The data and methodology are engaged in Section 3 while the empirical results are presented in Section 4. Section 5 concludes with implications and future research directions.

2. Theoretical underpinnings and related literature

2.1 Theoretical underpinnings

There are two fundamental theoretical underpinnings on the relationship between globalisation and inclusive development, namely, the: neoliberal and hegemonic perspectives (see Tsai, 2006; Asongu & Nwachukwu, 2017a). With regards to the hegemonic viewpoint, globalisation is a hidden agenda which is aimed at creating a new world order in which

development in the international arena would be determined by some global forces like powerful financial institutions and industrialised countries. According to this theoretical strand, the principal objective of globalisation is to facilitate capital accumulation on the one hand and on the other hand, broaden the rewards of growing openness from trade in commodities (entailing services and goods) to trade in assets in the financial sector. Some authors anticipate 'a *world-wide crisis of living standards for labor*', owing to the process of capital liberalisation that has been for most part borne by the working class because '*technological change and economic reconversion endemic to capitalist development has generated an enormous growing pool of surplus labor, an industrial reserve army with incomes at or below the level of subsistence*' (Petras & Veltmeyer, 2001, p. 24).

Another dimension of the hegemonic view articulates that the mechanisms of production determined for the most part by the neoliberal ideology are tailored such that they undermine channels through which the fruits of economic prosperity are redistributed as articulated by the social democracy in the Keynesian perspective. Smart (2003) maintains that the globalisation phenomenon is more appealing to the search for private interest to the detriment of more lofty goals like inclusive development. Accordingly, the process that enables even distribution of fruits resulting from globalisation-induced economic prosperity is enjoyed for the most part by wealthy elements of society and/or the elite that are already in privileged socio-economic positions (Scholte, 2000). Though, with less radical reverberations, the view of Scholte is largely shared by Sirgy et al. (2004).

The second theoretical perspective which underpins the neoliberal agenda argues that globalisation encapsulates an instrument of 'creative destruction' within the framework that innovation in technology, global trade and investments across borders enhance efficiency in production and economic prosperity, irrespective of associated characteristics of job substitution and falling wages for workers that are unskilled. According to the view, the disadvantages that are connected with globalisation are addressed by requesting unskilled workers to get more training and acquire novel skills in order to increase their potentials for benefiting from growing openness. Such potential rewards are likely to benefit a substantial part of the population if the labour market is affected by 'demand and supply' (Grennes, 2003).

2.2 Exclusive development in Africa and recent literature

This section is discussed in four strands, namely: (i) main poverty trends; (ii) responses to the main poverty trends; (iii) issues of gender inequality and (iv) gaps in the

literature. First, a 2015 World Bank report revealed that extreme poverty has been decreasing in all regions of the world with the exception of the African continent where close to 50% of countries in Sub-Saharan Africa were substantially off-track from achieving the Millennium Development Goal (MDGs) extreme poverty target (Asongu & Nwachukwu, 2017b). This unappealing trend in Africa contrasts to a great extend with evidence that the continent has been enjoying more than two decades of growth resurgence that began in the mid-1990s (see Fosu, 2015a). Moreover, the growing poverty trends in the continent are also not consistent with the 'Africa rising' narratives (Leautier, 2012) and premature conclusions that most African countries (with the exception of the Democratic Republic of Congo) achieved the MDG extreme poverty target toward the end of 2014 (Pinkivskiy & Sala-i-Martin, 2014). The underlying contrast has been partly explained by Obeng-Odoom (2015) who has posited that such contrasts may be traceable to the neoliberal experiment that has been focused on articulating the neoliberal ideology and placing less emphasis on more fundamental concerns like inequality and environmental degradation.

Second, contemporary literature responses to the growing inequality in Africa can be discussed in three main strands, notably: (i) new paradigms on the development of Africa and insights into growth resurgence in the continent; (ii) reinventing foreign aid for more inclusive development purposes and (iii) the relevance of globalisation in inclusive development. Firstly, a book has been edited by Fosu (2015bc) that is focused on assessing if the recent resurgence in growth experienced by countries in Africa is a myth or reality. Kuada (2015) in another book has suggested a paradigm shift to 'soft economics' (or human capability development) from 'strong economics' (or structural adjustment policies) as a prism for perceiving recent poverty trends in Africa. Secondly, the paradigm shift proposed by Kuada (2015) is broadly in accordance with a recent strand in African development literature that has focused on reinventing foreign aid for employment, poverty reduction and inclusive growth (Jones et al., 2015; Simpasa et al., 2015). Thirdly, on the nexus between globalisation and inclusive development, Azzimonti et al. (2014) have theorized that globalisation-related debts fundamentally drive exclusive development in developed countries: a theory that has been partly confirmed empirically within the African context by Asongu et al. (2015).

Third, as recently documented by Efobi et al. (2016), concerns related to female unemployment and growing poverty that are facing them are glaring policy issues confronting the female gender on the one hand and on the other hand, raise relevant concerns to African governments and development practitioners. Some narratives form the World

Bank (2015) and the International Labour Organisation (2013) demonstrate that in SSA, the percentage of the female gender employed in the informal economic sector is comparatively higher when seen in the light of their male counterparts[2]. Moreover, it is also posited that the productivity of women is far lower when compared to that from males. According to the narrative, poverty is felt more by women in the continent. As cases in point, between forty-eight and sixty-five percent of women are living in poverty in Niger, Benin, Burkina Faso and Mali. Furthermore, from a global perspective there is higher poverty prevalence among women in Africa compared to other continents of the world (Hazel, 2010; Women Thrive, 2014).

Consistent with the underlying literature, the poverty challenge confronting the female gender fundamentally builds on, *inter alia*: (i) a low competitive edge of women reflected in the labour, product and capital markets (Chen, 2001) and (ii) socio-cultural externalities that discourage investments in the training and education of women (Ramani et al., 2013). In the light of the latter, various dimensions of globalisation (social, political and economic) that are related to socio-cultural liberalism, education and gender emancipation can affect the participation of the female gender in domestic labour markets.

Fourth, the literature on the effect of globalisation on the emancipation of the female gender is still open to debate. Whereas a large bulk has focused on the effect of globalisation on the rights of the female gender in terms of wages and employment, the focus on Africa in the light of recent developments discussed above, is sparse. Seguino (2000) has investigated drivers of economic prosperity for a set of semi-industrialised export-driven economies in which the female gender provides a substantial proportion of labour within the export sector.

The main hypothesis tested by the study is that gender inequality which accounts for the comparatively low wage among women stimulates economic growth through the impact on exports during the period 1975 to 1995. The findings show that GDP growth is positively linked to gender inequality and the effect of gender wage inequality on economic growth is transmitted via its positive impact on investment. Heintz (2006) investigates sixteen low- and middle-income countries in the nexus between employment and economic growth within the framework of economic globalisation. The author finds that trade openness positively affects women's employment.

Richards and Gelleny (2007) and Cho (2011) demonstrate that democracy has a positive incidence on the rights of the female gender because laws promoting women's rights

[2]For example in Liberia, 65.4 percent of women are employed in the informal sector, compared to 33.4 per cent of men.

are more easily enacted and enforced while; Neumayer and De Soysa (2007) conclude that higher democracy is associated with higher women's social rights. Bussmann (2009) examine whether women are for the most part winners or losers of globalisation and conclude that economic integration does not have a direct impact in the improvement of women's life. The access of women to education (at the primary and secondary levels) increases slightly while no substantial improvement in the welfare of women is apparent. Oostendorp (2009) concludes that occupational gender gap decreases with growing economic prosperity in wealthy nations and decreases with foreign direct investment and trade in the same countries. Moreover, the effect of foreign direct investment and trade decrease the occupational gender wage gap in less developed countries.

3. Methodology and Data

3.1 Methodology

The relationship of interest is examined by specifying an equation that relates globalisation to economic participation of women (EPW, henceforth), as well as a set of control variables.

$$E.Participation_{it} = \alpha + \beta X_{it-1} + \delta V_{it-1} + \varepsilon_{it}\,, \qquad (1)$$

where X is a vector for the different dimensions of globalisation that are of interest in this study and believed to affect EPW. Since the impact of globalisation on EPW is unlikely to be instant, these variables are therefore lagged. Hence, the average globalisation in the previous period is consequently expected to explain the average EPW of the current period. This type of specification is advantageous since it tends to reduce potential reverse causality between globalisation and EPW. The identifier "v" connotes vectors of additional covariates that can act as potential mediators through which globalisation influences EPW. These covariates can also act as exogenous factors affecting EPW, but not influenced by globalisation. Hence, they reduce possible variable omission bias that could have occurred with the relationship of interest, assuming they were not included. Importantly, the inclusion of the mediator in equation (1) should portray an efficient estimate of the effect of globalisation on EPW.

In equation *(1)*, the error term is represented as "ε". In a standard Ordinary Least Squares (OLS) regression, the error term may be problematic, considering that the OLS assumes same variance and absolute independence of the error term for each regressor. To reduce this problem, robust standard errors can be estimated in case of within panel heteroscedasticity and autocorrelation. However, Bergh and Nilsson (2010) argue that when considering variables, such as globalisation, there are likely evidences of an increasing

interaction effect from inter-country linkages, since globalization fosters cross-country integration. Therefore, the possibility of within panel heteroscedasticity is ruled out because increasing country linkages imply that the errors within panel may be contemporaneously correlated across countries. To adjust for this situation, we follow Beck and Katz (1995) suggestion of applying panel-corrected standard errors (PCSE, hereafter) that allows for disturbances that are contemporaneously correlated across countries. For example, Bergh and Nilsson (2010), Feng and Yuan (2016), Gargouri and Keantini (2016) used the PCSE to examine globalisation and life expectancy, technology innovation and carbon intensity spill-over, and the determinants of public debt.

The PCSE approach permits for the inclusion of a unit-specific first-order autocorrelation (*AR1)* term that is specific to each country, in order to derive the correction for serial correlation, while retaining the unbiased OLS coefficient estimates. Reed and Webb (2010) suggest that the PCSE efficiently provides a way of obtaining better performance on standard error when the number of time periods is close to the number of groups that is being observed (i.e. T is close to N). To control for potential unobserved heterogeneity, the specifications include: (i) country dummies that capture the stable differences between countries in terms of EPW, and (ii) period dummies to capture the influence of policy shocks that may affect women in multiple countries at the same time.

Following Bergh and Nilsson (2010), we also estimate the relationship of interest using the OLS fixed effects regressions that adjust for clustering over countries. The fixed effects model is chosen as a complementary analysis because it is able to yield covariance matrix estimates that are consistent under the general conditions of within-panel heteroscedasticity and autocorrelation (Bergh & Nilsson, 2010).

3.2 Data

We create a panel dataset for the period 1990-2013, using different data sources. The dependent variable of interest in this study is the Economic Participation of Women (EPW). It is defined as the active participation of women in formal economic activities. Two indicators are used, consistent with Signorelli et al. (2012) and Elborgh-Woytek (2013). They include: *female labour force participation rate* and *female unemployment rate*. The *female labour force participation rate (flprt)* is measured as the proportion of females in the labour force that are aged 15 to 64 by the total working age population (World Bank, 2016). The *female unemployment rate (umrat)* on the other hand refers to the proportion of the female labour force that is available for work and currently not gainfully employed. The second

measure is used for robustness checks[3]. The female labour force participation rate is used as our primary outcome variable because it is generally considered a better indicator of economic participation, unlike the unemployment rate. Also, it is more representative of the number of women that are involved in economic activities (Efobi et al., 2016). The data comes from the International Labour Organisation (ILO) key Indicators of the Labour Market and the World Bank's World Development Indicators (World Bank, 2016).

Our globalisation indicator is the updated *KOF* globalisation index by Dreher et al. (2008). This index measures globalisation from three perspectives, which includes *economic globalisation– KOF1* (e.g. using trade and investment flows, as well as restrictions to these flows), *social globalisation – KOF2* (e.g. using personal contact, information flow and cultural proximity) and *political globalisation – KOF3* (e.g. using number of foreign embassies, memberships in international organisations and number of international treaties entered into by the country). Both the composite index that contains the aggregation of the three dimensions of globalisation *(KOF)* and the disaggregated form as earlier discussed are used. The composite index was derived based on equal weights across the three dimensions of globalisation. Whether the composite or the disaggregated measure, the index takes values between 0 and 100, where higher values indicate more globalisation, and vice-versa. These indices were logged in order to capture the non-linearity between globalisation and EPW.

The selection of additional control variables is mainly influenced by consensus in literature on some of the factors that determine EPW. For example, we control for *real GDP per capita* (PPP adjusted); *average years of schooling* for population that are over 15 years old (see Eckstein & Lifshitz, 2009; Steinberg & Nakane, 2012); *fertility rate* (see Bloom et al., 2009; Mishra & Smyth, 2010); and the type of political institution of the country, measured as *democratic freedom* (see Efobi et al., 2016). These control variables are assumed to be conservatively related to the determinants of EPW. To capture the demographic structure of the sampled countries, we correct for the national *dependency ratio* in our specifications (i.e. the share of young (people within age < 15) and old (age >64) relative to the working age population). The intuitions behind the inclusion of these variables are highlighted as follows: for the *real GDP per capita (rgdp)*, it is a measure of economic development, which implies more economic activities for individuals and better social mobility and employment. The *average years of schooling (sec_enrol)* and *fertility rate*

[3] The two indicators (female labour force participation and female unemployment rate) measure different aspects of EPW. The first measure considers the participation rate of women in the labour force, while the second measure considers the unemployment rate. The pairwise correlation between these two variables shows about 40 percent percentage association.

(fert_rat) are reflective of the extent to which individuals are educated and enlightened, and are less tied with home care activities in order to have more time to be actively involved in economic activities. Whereas schooling provides for opportunities of knowledge acquisition and hence, a competitive edge in the labour market, fertility decreases the propensity of women to get actively involved in the job market because of constraints associated with pregnancy. *Democratic freedom (dem)* and *dependency ratio (dep_ratio)* show the extent to which individuals are less restrained as well as a freer to be involved with economic activities. Hence, more freedom and less restrains should logically be associated with more economic participation.

To test the robustness of the results, several control variables and other analytical techniques are applied. For instance, we check whether rapid changes in the growth of urban population affects our relationship of interest. We also check for the sensitivity of our results to changes in government consumption as a share of GDP (which measures government size), the legal system of each sampled country (which captures issues related to social tolerance) as well as other country-specific features like: natural resource prevalence, health, level of technology advancement and the level of industrialisation, among others.

Table 3.1: Summary Statistics

Variable	Mean	Std. Dev.	Min	Max	N
flprt	61.64	17.19	18.80	90.30	360
umrat	12.83	11.05	0.20	47.10	125
KOF	38.13	10.40	8.53	66.21	359
KOF1	43.23	14.73	9.78	85.54	320
KOF2	25.54	11.52	6.58	64.09	367
KOF3	51.56	17.87	13.55	90.78	359
rgdp°	7.710	0.955	5.651	10.782	359
sec_enrol	33.21	25.58	2.42	115.14	253
fert_rat	5.41	1.30	1.51	7.75	375
dem	3.56	1.61	1.00	7.00	368
dep_ratio	88.46	12.97	41.12	111.81	376

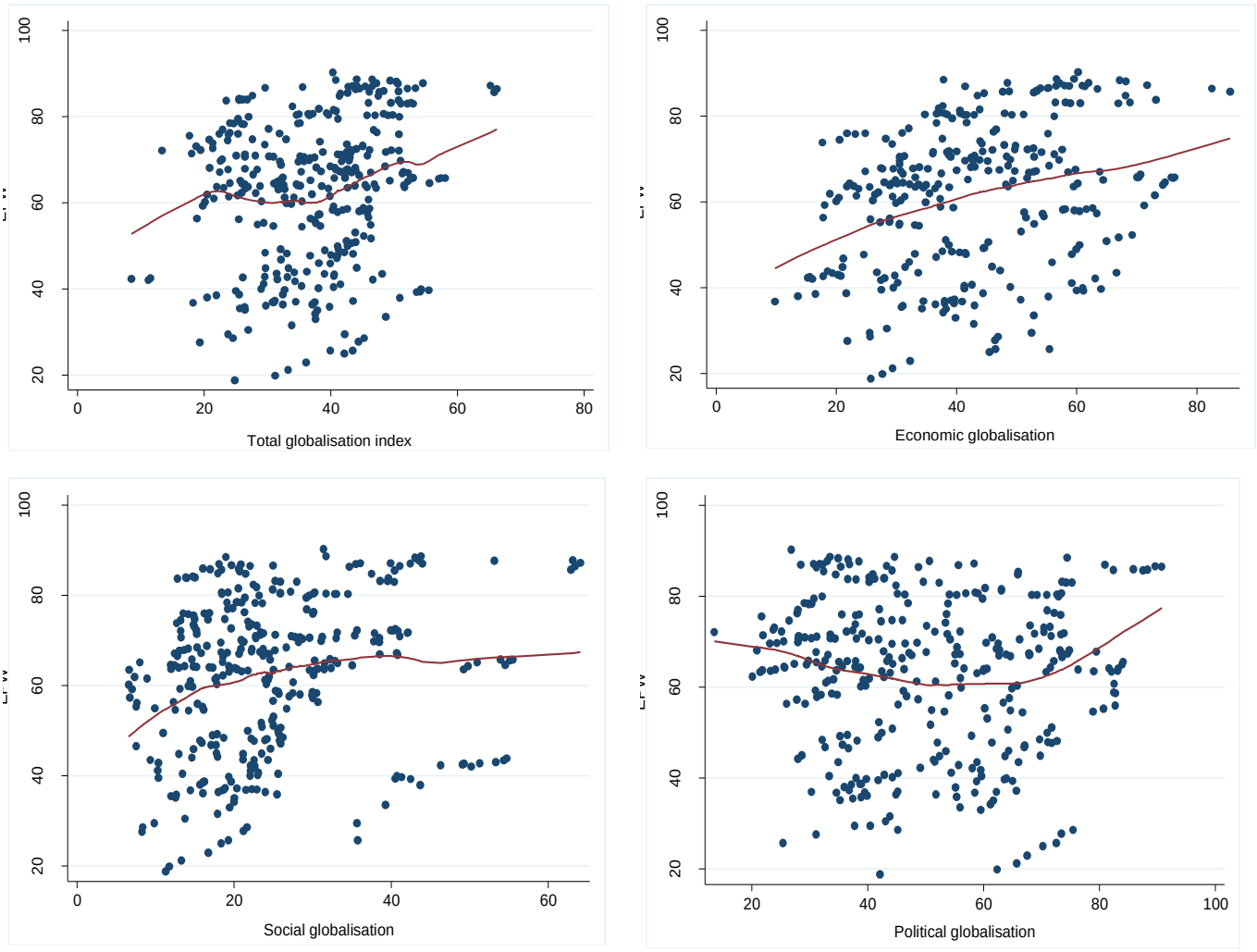
Note: ° the real GDP (i.e. *rgdp*) was disclosed in its logarithm in order for the means of indicators to be comparable. The other abbreviations connote - unemployment rate "*umrat*"; total globalisation "*KOF*"; economic globalisation "*KOF*1"; social globalisation "*KOF*2"; political globalisation "*KOF*3"; secondary school enrolment rate "*sec_enrol"*; fertility rate "*fert_rat*"; democracy "*dem*"; dependency ratio "*dep_ratio"*

The initial sample consists of an unbalanced panel of 47 Sub-Sahara African countries for which data are available. The period comprises three year non-overlapping averages from 1990-2013 (i.e. 1990-1992; 1993-1995; 1996-1998; 1999-2001; 2002-2004; 2005-2007; 2008-2010; 2011-2013). The non-overlapping average was preferred in order to reduce the porosity of the data as there were a lot of missing values for some of our sampled countries. As a result, the effective sample is smaller than the population of possible observations. For

our estimation, we restrict the sample to similar sizes across our tested specifications. The list of the sampled countries is presented in Table A in the appendix.

The summary statistics of the main variables of interest are presented in Table 3.1. The standard deviations of EPW (i.e. *flprt*) and the measure of the demographic structure of the country (i.e. *dep_ratio*) are the highest among our series. This indicates high variation between the populations EPW of the sampled countries. The standard deviations of the four indicators of globalisation were also very high.

Figure 3.1: Locally Weighted Regression (Lowess) Unconditional Association between Components of Globalisation and EPW



Source & Note: Computed from our sample. There is a common bandwidth of 0.8 for the four graphs.

To conclude the descriptive statistics, we present the local regression graphs plotting non-parametric bivariate relationships between each measure of globalization and EPW prevalence in the respective countries in Figure 3.1. The figures reveal that the relationship between globalisation and EPW appears to be non-linear and positive for higher levels of

globalisation. This tendency is quite pronounced for the economic globalisation index. It appears that at higher levels of social globalisation, EPW remains high: thus, as countries increase in this form of globalisation, an equivalent increase is observed for the trend of EPW. On the other hand, it appears considerably weaker for the social and political globalisation, and the relationship still remains non-linear. The same trend is observed for total globalisation: a non-linear relationship (i.e. an increase of EPW at early stages of total globalisation and then a continuous increase, but at higher stages of total globalisation). This result suggests that at heightened globalisation, the EPW in SSA increases and vice versa.

4. Empirical results

Before presenting the estimation results, we perform some diagnostic tests to determine outliers and multicollinearity: the latter has the potential to inflate our standard errors and thus, bias our results. Considering the outlier check, we use the Hadi method ("mcd" syntax in *Stata*) to check for outliers. We do not detect any outliers from our series. The multicollinearity check was performed using the pairwise correlations between the variables of interest. The result of this exercise is presented in Table B in the appendix. From the Table, we observe a close relationship between the indicators of globalisation, among others. Real GDP and democracy were the only control variables found to be free of strong association with the other explanatory variables. Therefore, these two variables will be included as a baseline, and the other variables will be included interchangeably to reduce incidences of bias.

4.1 Baseline Estimations

Table 4.1 presents the results for the relationship between globalisation and EPW, while controlling for the real GDP and democracy status of the country. Regressions using the panel-corrected standard errors - PCSE (with *Stata* syntax "xtpcse") suggest that the composite *KOF* Index is positively related to EPW: an increase in the composite index of globalisation significantly improves the EPW of the sampled countries. Considering the components of the index separately (columns 2a, 3a and 4a), it appears that the previous result for the composite *KOF* index is driven by economic globalisation. We find a significant relationship between social globalisation and EPW. However, the magnitude of the coefficient was marginal. For the political globalisation, we find no significant

relationship with EPW. The effect of GDP per capita and the measure of democracy is negatively related to EPW.

For the fixed-effects (FE) estimation results in columns 1b-4b of Table 4.1, we find that it supports the earlier findings that there is a positive association between the composite index of globalisation and EPW. More so, we find support for the result that economic globalisation has a positive EPW effect. More so, though marginal, social globalisation still maintains a positive and significant relationship with EPW. However, the effect of political globalization on EPW turned negative and was significant at the 10 percent levels. The result indicates that countries with more diplomatic presence (like embassies and consulates) and that are more involved with the international community (in terms of treaties and ratifications) tend to experience a lower average EPW. We will return to the discussions of the results in latter part of the study.

Table 4.1. Globalization and EPW. Dependent variable: Female Labour Force Participation

	1a	1b	2a	2b	3a	3b	4a	4b
KOF_{t-1}	0.159** (0.063)	0.110* (0.062)	----	----	----	----	----	----
$KOF1_{t-1}$	----	----	0.198*** (0.055)	0.198*** (0.055)	----	----	----	----
$KOF2_{t-1}$	----	----	----	----	0.086** (0.040)	0.080** (0.039)	----	----
$KOF3_{t-1}$	----	----	----	----	----	----	-0.066 (0.049)	-0.064* (0.027)
rgdp°	-0.152** (0.076)	-0.079*** (0.019)	-0.046** (0.020)	-0.046** (0.021)	-0.076*** (0.018)	-0.077*** (0.019)	-0.067*** (0.019)	-0.068*** (0.010)
dem	-0.036* (0.011)	-0.032** (0.011)	-0.037*** (0.012)	-0.037*** (0.012)	-0.030*** (0.010)	-0.030*** (0.011)	-0.038*** (0.011)	-0.038*** (0.006)
Constant	-6.520 (5.893)	4.430*** (0.277)	-2.180 (0.692)	3.839*** (0.301)	-4.160 (5.004)	4.549*** (0.209)	-10.446** (5.089)	5.017*** (0.072)
R-squared	0.088	0.106	0.128	0.122	0.134	0.126	0.123	0.115
Wald Chi^2	30.330	12.260	40.460	12.670	50.170	15.350	45.550	8.260

Note: the PCSE estimations include both the country and period dummies; the panel-corrected standard errors are included in brackets. The Fixed Effects estimations include the country and period fixed effects and the robust standard errors are in brackets.

* Denotes statistical significance at 10% level.

** Denotes statistical significance at 5% level.

*** Denotes statistical significance at 1% level.

°the real GDP (i.e. *rgdp*) was presented in its logarithm form. The other abbreviations connote- total globalisation "*KOF*"; economic globalisation "*KOF*1"; social globalisation "*KOF*2"; political globalisation "*KOF*3"; democracy "*dem*".

Table 4.2 shows how the results behave when including additional control variables using the PCSE estimation technique. The positive association between the aggregate globalisation index and EPW was still maintained across all specifications and at the 1 and 10 percent levels of significance. This is apart from Column 2, when the level of female education was included in the regression analysis: the overall globalisation index lost its

significance at this point. Thus, suggesting that the relationship between the overall globalisation index and EPW is sensitive to the level of female education. Overall, the positive association was still maintained. The economic globalisation indicator remains positive and significant across specifications. The magnitude of the effect is rather stable, with an average coefficient value of approximately 22 percent, suggesting that a one percent increase in economic globalisation increases EPW by about 22 percent. For the social globalisation, we find evidence of a positive and significant impact on EPW. The political globalisation variable is consistently insignificant across the estimations of Table 4.2.

The positive result that was found for most of the globalisation variables and even the composite index of globalisation tends to confirm the findings of Signorelli et al. (2012) that more openness is associated with a higher EPW. Though the authors' study did not consider globalisation as a main indicator, they included it as a potential and serious factor that can affect female labour force participation. The signs of GDP per capita and democracy did not change across the estimations (see columns 1a-4c). As expected, the variable "fertility rate" displays a negative sign across the columns where it was featured in Table 4.2. The coefficient was consistently significant at the 10 percent level of significance. On the other hand, the educational level of the woman was found to have a positive and significant impact on their level of economic participation. Still, similar result appears in studies like Bloom et al. (2009) and Cipollone et al. (2012), who found fertility rate as having a negative impact on the economic participation of women, whereas education has a positive impact.

The negative effects of the GDP per capita and democracy variables both in Tables 4.1 and 4.2 are unexpected. It is important to note that the effect of GDP per capita may be negative if economic growth is not broad-based on the one hand and if the fruits of economic prosperity are not evenly distributed on the other hand. In essence, economic prosperity that is skewed to specific industries like extractive industries is not likely to drive employment from a broad perspective. This is the case with most African countries where economic growth is substantially driven by the export of natural resources (Obeng-Odoom, 2013, 2015). Moreover, when economic prosperity is not evenly distributed, the theoretical construct of GDP per capita (ratio of economic growth on population) may not yield the desired effect on improving conditions for social mobility and decreasing features of employment vulnerability. This tendency is most apparent in Africa in the light of the evidence that extreme poverty has been growing in the continent in spite of it enjoying more than two decades of growth resurgence (Fosu, 2015a; Kuada, 2015). The negative effect of democracy can be explained through the time and level hypotheses before enjoying the full

benefits of democracy. In essence, most African countries are characterised with immature and weak democracies (see Asongu & Nwachukwu, 2016b). The democratic scenarios in African countries, on the other hand, may not be inclusive: critically excluding some certain groups of the population like women. Most women in Africa are excluded from the industrial growth process; partly because they constitute a large proportion of the non-industrial labour force (see Ramani et al., 2013), and their low level of human capital development may explain the furtherance away from being included in the democratic process[4].Thus, it is important to consider gender sensitive policies into the African democratic process.

The positive effect of globalisation on EPW in SSA countries can be seen from two intuitive backgrounds. First is the economic openness effect, where globalisation enhances the inflow of investment, firms and industrial growth (see Hawkes, 2006; Goryakin et al., 2015) that creates more employment opportunities and therefore accommodates more individuals (that would have been excluded) in the job market. The second is the social value reconstruction effect that globalisation brings: this implies that globalisation improves the social perception and tolerance for some groups like women to be actively involved in the labour market. This group of individuals may be strongly affected by social intolerance within the society, assuming globalisation is not enhanced. For instance, some SSA countries like Zimbabwe (see Mutopo et al., 2015), Zambia (see Fao, 2011), Uganda and Rwanda (see Ali et al., 2014; Doss et al., 2014) face some level of gender inequity in the labour market. This is largely caused by patrimonial paradigms or heritage regimes that are upheld by the society and which naturally hedges out women from actively being involved in the labour force. With social globalisation, there is a favourable shift in the societal perception of the role of women, which gives them better advantages to participate in formal labour employment. Berggren and Nilsson (2015) pointed this fact out in their study on globalisation and transmission of social values.

[4]See Tseloni et al. (2011) for further discussion on the negative relationship between democracy and women economic participation.

Table 4.2. Including additional control variables. Dependent variable: Female Labour Force Participation.

	1a	1b	1c	2a	2b	2c	3a	3b	3c	4a	4b	4c
KOF_{t-1}	0.112*** (0.063)	0.099 (0.082)	0.120* (0.064)	----	----	----	----	----	----	----	----	----
$KOF1_{t-1}$	----	----	----	0.198*** (0.055)	0.245*** (0.072)	0.211*** (0.056)				----	----	----
$KOF2_{t-1}$	----	----	----	----	----	----	0.085** (0.040)	0.100* (0.053)	0.087** (0.040)	----	----	----
$KOF3_{t-1}$	----	----	----	----	----	----	----	----	----	-0.065 (0.049)	-0.073 (0.058)	-0.071 (0.050)
rgdp°	-0.102*** (0.022)	-0.152*** (0.034)	-0.070*** (0.022)	-0.067*** (0.025)	-0.142*** (0.038)	-0.030 (0.025)	-0.097*** (0.023)	-0.143*** (0.033)	-0.068*** (0.022)	-0.093*** (0.022)	-0.131*** (0.034)	-0.054*** (0.022)
dem	-0.039*** (0.011)	-0.045*** (0.016)	-0.024 (0.011)	-0.044*** (0.013)	-0.066*** (0.019)	-0.033*** (0.012)	-0.036*** (0.011)	-0.042*** (0.015)	-0.028*** (0.011)	-0.047*** (0.012)	-0.047*** (0.003)	-0.036*** (0.011)
fert rate	-0.033* (0.019)	----	----	-0.031* (0.019)	----	----	-0.028* (0.019)	----	----	-0.036* (0.019)	----	----
sec_enrol	----	0.004** (0.002)	----	----	0.005*** (0.002)	----	----	0.003** (0.002)	----	----	0.003*** (0.002)	----
dep_ratio	----	----	0.001 (0.001)	----	----	0.002 (0.002)	----	----	0.001 (0.002)	----	----	0.002 (0.002)
constant	-6.520 (5.641)	4.969 (7.287)	-4.732 (6.446)	0.577 (5.772)	11.345 (7.638)	-3.657 (5.643)	-1.422 (5.323)	4.688 (6.776)	-5.173 (5.215)	-6.939 (5.399)	-3.903 (6.811)	-12.017** (5.327)
R-squared	0.088	0.143	0.114	0.135	0.166	0.132	0.139	0.169	0.135	0.133	0.154	0.126
Wald chi2	30.330	37.530	41.120	42.830	38.190	42.680	52.720	47.450	51.04	49.77	42.09	47.12
Prob > chi2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0

Note: the PCSE estimations include both the country and period dummies; the panel-corrected standard errors are included in brackets.

* Denotes statistical significance at 10% level.

** Denotes statistical significance at 5% level.

*** Denotes statistical significance at 1% level.

°the real GDP (i.e. *rgdp*) was disclosed in its logarithm form. The other abbreviations connote - total globalisation "*KOF*"; economic globalisation "*KOF*1"; social globalisation "*KOF*2"; political globalisation "*KOF*3"; democracy "*dem*"; fertility rate "*fert_rat*"; secondary school enrolment rate "*sec_enrol"*; dependency ratio "*dep_ratio"*

4.2 Sensitivity Analysis

Table 4.3 includes the list of the PCSE regression coefficient estimates of the composite globalisation index as well as the coefficient and significant values of the sub-indices for several sensitivity tests. The tests include all the control variables as in Table 4.2, because the baseline results did not change despite the inclusion of the other control variables like fertility rate, secondary enrolment and even the dependency ratio. To begin the sensitivity tests, we first confirm that our results hold when all the control variables are included in a single equation. This estimation was performed using the PCSE. Second, we confirm that our results did not change when estimating a random effects model. We follow the wisdom of Bergh and Nilsson (2010) that since the number of cross sections is way higher than the time period, using a random effects model will put a lot of weight on cross-country variation.

Next we examine the robustness of the results by including – separately – the level of industrialisation, technology infrastructure, macro-economic condition (measured using inflation rate) and the adult health condition (using the number of adults – ages 15+ - that are newly infected with HIV). We considered these four additional control variables as important following the intuition in UNIDO (2013) and Gui-Diby and Renard (2015) for industrialisation and its effect on employment growth; Lee (2009) and Efobi et al. (2016) on technology and female economic activities; Diaz-Bonilla (2015) on macro-economic condition effect on industrialisation, which affects employment and economic participation in developing countries; and Asiedu et al. (2015) on the linkage between health conditions and economic participation of workers in SSA countries. Interestingly, the sign and significant values of the main indicators of globalisation remained consistent as in Tables 4.1 and 4.2. Clearly, the overall globalisation index was positive and significant for almost the entire estimations. The economic and social globalisation index was positive and significant for the entire checks, while political globalisation index was negative and significant for most of the estimations.

Other types of robustness checks were conducted to address issues surrounding replacement of variables and further inclusion of other forms of control variables. An alternative explained variable – female unemployment – was included as a measure of EPW, and then we considered a different measure of female education[5], after which we included controls for urban population growth. For these checks, nothing changed in the signs and significant values of our globalisation variables. For instance, the signs of the total, economic

[5]Since this variable consistently remained non-significant across the estimations in Tables 4.1 and 4.2

and social globalisation index suggest that an increase can reduce female unemployment in SSA countries. The signs and significant values of the political globalisation index also suggest similar outcomes. For the inclusion of a different measure of female education and the urban population growth control variable, we found consistent signs and significant values (for most) as in Tables 4.1 and 4.2.

Yet another group of sensitivity checks that were of interest to us include examining whether our baseline results (as in Tables 4.1 and 4.2) change when excluding some groups of countries. First, we include only common law countries and then other legal regime types as a sub-sample, to see whether the countries' legal system has an effect on our result. We deem this test necessary considering that some authors argue that there is a direct relationship between the legal system of a country and the freedom of economic participation of some population groups. For instance, Chiongson et al. (2011) observe that the legal system of countries impacts the economic capacity of people, in terms of accumulating endowments, enjoying returns to such endowments, access rights and resources, and acting as free and autonomous agents in society. From our analysis, we find no significant change in the signs and significant values of the globalisation variables. This apparently gives us confidence in our initial description of the relationship between globalisation and EPW. Next, we use the World Bank classification of countries to separate the sample into low income countries and then middle (and high) income countries. From our sample, only two countries are in the high income category (Equatorial Guinea and Seychelles). The results in Table 4.3 are not in contrast with those in Tables 4.1 and 4.2. Moreover, the behaviour of the globalisation variables is consistent with those established in baseline results when we further control for conflict intensity among sampled countries.

To summarise, the positive effect of the overall globalisation index, the sub-index (economic and social globalisation) and then the negative political globalisation index on EPW, is very robust. The positive effect of the overall globalisation index on EPW is reinforced by the increasing impact of economic and social globalisation. Increasing economic and social integration with other countries is important in improving the average EPW outcome in SSA countries. A closer examination of the negative relationship between political globalisation and EPW data reveals that it is only in countries with high conflict that political globalisation tends to have a positive and significant impact on EPW. This result does not tend to support the fact that political instability is needed to achieve higher political integration and a higher EPW; however, our result tends to point to the fact that countries need to open-up politically to achieve better EPW.

Table 4.3: Sensitivity Analysis

Variation	Composite *KOF* Index	Significant Components			Comments
Include all control variables	0.141* (0.081)	$KOF1_{t-1}$	0.321***	(0.075)	For all the estimations, real GDP, democracy, fertility rate and dependent ratio was significant and signed as earlier described.
		$KOF2_{t-1}$	0.095*	(0.051)	
		$KOF3_{t-1}$	-0.110**	(0.055)	
Performing the random effects estimation, including robust standard errors.	0.088*** (0.034)	$KOF1_{t-1}$	0.267***	(0.042)	All the control variables were significant and maintained consistent signs as in Table 4.2. Only secondary enrolment did not maintain its consistent significant value.
		$KOF2_{t-1}$	0.067**	(0.030)	
		$KOF3_{t-1}$	-0.085***	(0.030)	
Controlling for the level of industrialisation (using the GFCF as % of GDP)	0.203** (0.090)	$KOF1_{t-1}$	0.267***	(0.078)	For most of the estimations, the secondary enrolment variable was not significant. The signs and significant values of other control variables remained as given in previous estimations.
		$KOF2_{t-1}$	0.093*	(0.052)	
		$KOF3_{t-1}$	-0.078	(0.061)	
Controlling for the level of technology development in the sampled countries; measured as the mean of mobile phone & internet usage per 100 persons.	0.146* (0.078)	$KOF1_{t-1}$	0.316***	(0.075)	Just like in the other estimations, the secondary school enrolment remained non-significant. The signs and significant values of the other variables are as in Table 4.1 and 4.2. The technology variable was not significant in all the estimations.
		$KOF2_{t-1}$	0.085*	(0.051)	
		$KOF3_{t-1}$	-0.091*	(0.054)	
Controlling for the macroeconomic condition of the country. The inflation rate was used as a proxy measure.	0.183** (0.091)	$KOF1_{t-1}$	0.336***	(0.079)	The secondary enrolment variable remains insignificant. The inflation variable was not consistent in its significant values. The other variables were consistently signed.
		$KOF2_{t-1}$	0.101*	(0.054)	
		$KOF3_{t-1}$	-0.133**	(0.063)	
Controlling for adult heath conditions in the country. We used the number of adults – ages 15+ - that are newly infected with HIV	0.123 (0.083)	$KOF1_{t-1}$	0.393***	(0.066)	The adult health condition was significant and a 1 percent increase in its value will result in a less than proportionate increase in EPW. The secondary enrolment variable remained non-significant, while the other variables had similar sign and significance as in Tables 4.1 and 4.2.
		$KOF2_{t-1}$	0.124**	(0.013)	
		$KOF3_{t-1}$	-0.106*	(0.055)	
Using female unemployment as alternative explained variable.	-1.176*** (0.432)	$KOF1_{t-1}$	-1.233***	(0.442)	The real GDP per capita and the secondary enrolment variable was consistently insignificant. The signs of the variables were the same as in Tables 4.1 and 4.2.
		$KOF2_{t-1}$	-0.020	(0.307)	
		$KOF3_{t-1}$	-0.685**	(0.279)	
Considering a different measure of female education. We used School enrolment, tertiary (gross), gender parity index (GPI) as alternative measures.	0.149* (0.080)	$KOF1_{t-1}$	0.256***	(0.074)	As expected, the signs of the globalisation variable follow a similar pattern as in Tables 4.1 and 4.2. The new measure of education was not significant in any of the models.
		$KOF2_{t-1}$	0.070	(0.053)	
		$KOF3_{t-1}$	-0.147**	(0.065)	

Controlling for urban population growth. Since most formal employments are in urban settlements, then controlling for the population that competes for job placement becomes very important.	0.119 (0.145)	$KOF1_{t-1}$	0.308***	(0.074)	The variable "urban population growth" was significant in all the estimation models. Thus, suggesting that it is an important explainer of EPW. As expected, the variable "secondary enrolment" was not significant across the estimations. As in Tables 4.1 and 4.2, the other control variables follow usual signs and significant values.
		$KOF2_{t-1}$	0.121**	(0.052)	
		$KOF3_{t-1}$	-0.131**	(0.056)	
Common law colonies (20 countries)	0.113 (0.091)	$KOF1_{t-1}$	0.412***	(0.081)	The other control variables were consistently signed and significant values remained within the range of 1 to 10 percent. Only real GDP variable was not significant in most of the estimations.
		$KOF2_{t-1}$	-0.070	(0.062)	
		$KOF3_{t-1}$	-0.146***	(0.053)	
Civil law countries (26 countries)	0.115* (0.088)	$KOF1_{t-1}$	0.225***	(0.077)	The signs of the control variables were the same. However, the significant values were different for most of the variables.
		$KOF2_{t-1}$	0.170***	(0.044)	
		$KOF3_{t-1}$	-0.042	(0.066)	
Only low income countries (25 countries)	0.356*** (0.194)	$KOF1_{t-1}$	0.492**	(0.199)	The subsample include only those countries with a GNI per capita of $1,045 or less in 2014
		$KOF2_{t-1}$	0.288***	(0.150)	
		$KOF3_{t-1}$	0.112	(0.174)	
Only middle income countries (22 countries)	0.176 (0.139)	$KOF1_{t-1}$	0.222*	(0.121)	Middle income countries include those with GNI per capita of more than $1,045 but less than $12,736, while high-income economies are those with a GNI per capita of $12,736 or more. From our sample, only Equatorial Guinea and Seychelles are high income countries.
		$KOF2_{t-1}$	0.214***	(0.068)	
		$KOF3_{t-1}$	-0.054	(0.087)	
Only countries with relative less conflict occurrences (12 countries).	0.079 (0.084)	$KOF1_{t-1}$	0.252***	(0.081)	The classification was based on Asongu (2015) classification of countries according to the extent of conflict occurrence within the country. The signs of the globalisation variables did not change.
		$KOF2_{t-1}$	0.081	(0.055)	
		$KOF3_{t-1}$	-0.147**	(0.066)	
Only countries with high conflict occurrences (35 countries).	0.189** (0.075)	$KOF1_{t-1}$	0.203***	(0.048)	The political globalisation variable now turned positive and significant. Other results did not change.
		$KOF2_{t-1}$	0.032	`(0.053)	
		$KOF3_{t-1}$	0.179***	(0.054)	

Notes: the PCSE estimations include both the country and period dummies; the panel-corrected standard errors are included in brackets. The Fixed Effect estimations include the country and period fixed effects and the robust standard errors are in brackets. The abbreviations connote - total globalisation "*KOF*"; economic globalisation "*KOF*1"; social globalisation "*KOF*2"; political globalisation "*KOF*3";
* Denotes statistical significance at 10% level.
** Denotes statistical significance at 5% level.
*** Denotes statistical significance at 1% level.

4.3 Extended Analysis by Unbundling Economic and Social Globalisation

The relationships between economic globalisation, social globalisation and EPW may well differ across the distribution of underlying globalisation variables. For one thing, these two

sub-indexes are the main drivers of the positive effect of the overall globalisation index on EPW. Thus, the need to pay particular attention to its components, and to enhance the policy implication of our results; we therefore plug each of the components into the estimation model and the results are presented in Table 4.4. We present the results of the control variables alongside our variables of interest, despite their proven consistency in Table 4.1 and 4.2.

For economic globalisation, there are two sub-indices as presented in the *KOF* globalisation database. Specifically they include actual economic flow[6] and restrictions (including import barriers, tariff and taxes and capital restrictions). On the other hand, social globalisation includes personal contacts[7], information flows (such as internet and television usage, and trade in newspapers), and then cultural proximity (foreign restaurants and books available). From Table 4.4 it is evident that: first, for the economic globalisation, actual flows matter more in driving EPW than the restrictions that could be relaxed to improve economic integration. Although we observed a positive association for the restriction sub-index, the coefficient was not significant. For social globalisation, we observe that information flow is most important in driving EPW than personal contact and cultural proximity.

Table 4.4. Globalization and EPW. Dependent variable: Female Labour Force Participation

	Economic Globalisation		Social Globalisation		
	Actual flows	Restrictions	Personal contact	Information flows	Cultural proximity
$Globalisation_{t-1}$	0.130***	0.032	0.059	0.076**	0.024
	(0.042)	(0.049)	(0.039)	(0.037)	(0.029)
rgdp°	-0.150***	-0.176***	-0.154***	-0.159***	-0.158***
	(0.035)	(0.040)	(0.036)	(0.035)	(0.035)
dem	-0.008	-0.018	-0.015	-0.018	-0.015
	(0.015)	(0.017)	(0.015)	(0.015)	(0.331)
fert rate	-0.125***	-0.136***	-0.150***	-0.151***	-0.149***
	(0.043)	(0.046)	(0.043)	(0.042)	(0.042)
sec_enrol	-0.001	0.001	-0.001	0.001	-0.001
	(0.002)	(0.657)	(0.002)	(0.002)	(0.002)
dep_ratio	0.009***	0.010***	0.011***	0.011***	0.011***
	(0.003)	(0.004)	(0.003)	(0.003)	(0.003)
constant	4.562***	5.133***	6.365	6.463	5.579
	(0.437)	(0.497)	(6.471)	(6.331)	(6.548)
R-squared	0.194	0.179	0.199	0.205	0.192
Wald chi2	54.200	42.86	57.16	60.98	56.26
Prob > chi2	0.000	0.000	0.000	0.000	0.000

Note: the PCSE estimations include both the country and period dummies; the panel-corrected standard errors are included in brackets.

* Denotes statistical significance at 10% level.

** Denotes statistical significance at 5% level.

[6]in terms of trade, foreign direct investment, portfolio investment and income payments to foreign nationals,

[7] Such as telephone traffic, transfers, international tourism, foreign population and international letters per capita.

*** Denotes statistical significance at 1% level.
°the real GDP (i.e. *rgdp*) was disclosed in its logarithm form. The other abbreviations connote - democracy "*dem*"; fertility rate "*fert_rat*"; secondary school enrolment rate "*sec_enrol"*; dependency ratio "*dep_ratio"*

5. Concluding implications and future research directions

This study has assessed the relationship between globalisation and the economic participation of women (EPW) in 47 Sub-Saharan African countries for the period 1990-2013. Two indicators are used to measure EPW, namely, the: female labour force participation and employment rates. Various globalization measurements are used to reflect political, social, economic as well as composites aspects of globalization. The empirical evidence is based on Panel-corrected Standard Errors and Fixed Effects regressions. The findings show that the positive effect of the overall globalisation index on EPW is dampened by its political component and driven by its economic and social components, with a higher positive magnitude from the former or economic globalisation. For the most part, the findings are robust to the control for several structural and institutional characteristics: varying conditioning information sets, changes in the growth of urban population, government consumption, legal systems, resource-wealth, health, technological advancement, political strife and conflicts, income levels and levels of industrialisation. An extended analysis by unbundling globalisation shows that the positive incidence of social globalisation is driven by information flow (compared to personal contact and cultural proximity) while the positive effect of economic globalisation is driven by actual flows (relative to restrictions). In what follows, policy implications are discussed with particular emphasis on how to boost information and actual flows pertaining respectively to social and economic globalisation.

First, actual flows in economic globalisation can be increased by tailoring inclusive policies both at the international and domestic levels. On the one hand, at the international level, policies of the World Trade Organisation (WTO) need to be less skewed in favour of wealthy nations, to the detriment of Africa. Whereas women in Africa are more employed (formally and informally) in the agriculture sector, exporting agricultural products to some developed countries is inhibited by very high tariffs. For instance, even by the standards of the European Union and the United States, some aspects of the free market ideology are strategically tailored to stifle free market competition that directly affects Africa's industrialisation process. To put these points into perspective, three contemporary examples are worthwhile. (i) Consistent with Joseph Stiglitz in 'Making Globalisation Work' (Stiglitz, 2007), the United States would not be at the forefront of exporting cotton to the rest of the

world, without subsidies offered by the USA government. (ii) The same narrative maintains that a cow receives a subsidy of 2 USD per day in the European Union, while the majority of women in Africa are unemployed and live with less than 2 USD/day. (iii) Above all, the principles of comparative advantage underpinning the neoliberal ideology are not taken into account in the European Union that allocates about half of its budget subsidies to agriculture and the agri-foods industry that represent just about 6% of its GDP (see Asongu & Nwachukwu, 2016a). Majority of women are engaged in the agricultural sector in African countries.

Moreover, powerful multinational companies are engaging in illicit capital flight activities that are reducing tax revenue that should have been used by domestic governments to invest in activities that favour female economic participation. Whereas transfer pricing for tax avoidance is legal, tax mispricing or tax evasion is illegal. Unfortunately, international multilateral institutions do not yet have the jurisdiction and power to hold multinational companies accountable for transfer mispricing (see Asongu & Nwachuwku, 2016c).

On the other hand, at the domestic level, sound import-substitution and industrial promotion policies are imperative, in addition to diversifying resource-driven economies to other sectors in order to promote inclusiveness in employment and ensure broad-based economic prosperity. In the light of skewed international trade policies to the benefit of developed countries, some protectionist policies are needed in Africa at this early stage of industrialisation. However, such protectionist policies should be ultimately curtailed with maturity of industry in order to mitigate complacency in innovation. This is essentially because, developed countries that are preaching free market competition and liberalisation depended on protectionist policies to set the foundations of industrialisation, economic development and female economic participation they now enjoy (Chang, 2008; Mshomba, 2011).

Secondly, the information flow component of social globalisation can be improved by aligning various information and communication technology (ICT) policies with the economic participation of women. Hence, in promoting *inter alia*, fixed broadband, internet and mobile phone ownership, the role of such ICT in boosting female employment should be carefully considered. Such consideration could be made through ICT-specific schemes, universal ICT coverage policies and low pricing channels. Enhancing liberalisation of the ICT sector may also be a means to the above ends. In essence, women, especially female entrepreneurs should be provided with incentives that enable them to leverage on ICT in terms of, *inter alia*: cost effectiveness, interactions, adoption, efficiency, access and reach.

Future research can focus on assessing how the negative effect of political globalisation and insignificant impacts of some components of social and economic globalisation can be improved to positively affect the economic participation of women. Moreover, assessing whether the established findings withstand empirical scrutiny within country-specific frameworks is worthwhile for more targeted policy implications.

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APPENDIX

Table A: List of Sampled Countries

Angola (FC, M)	Congo, Rep. (FC, M)	Kenya (C, M)	Niger (FC, L)	Sudan (C, M)
Benin (FC, L)	Cote d'Ivoire (FC, M)	Lesotho (C, M)	Nigeria (C, M)	Swaziland (C, M)
Botswana (C, M)	Equatorial Guinea (FC, H)	Liberia (C, L)	Rwanda (FC, L)	Tanzania (C, L)
Burundi (FC, L)	Eritrea (FC, L)	Madagascar (FC, L)	Sao Tome and Principe (FC, M)	Togo (FC, L)
Cameroon (FC, M)	Ethiopia (FC, L)	Malawi (C, L)	Senegal (FC, M)	Uganda (C, L)
Cape Verde (FC, M)	Gabon (FC, M)	Mali (FC, L)	Seychelles (C, H)	Zambia (C, M)
Central African Republic (FC, L)	Gambia, The (C, L)	Mauritania (FC, M)	Sierra Leone (C, L)	Zimbabwe (C, L)
Chad (FC, L)	Ghana (C, M)	Mauritius (C, M)	Somalia (C, L)	
Comoros (FC, L)	Guinea (FC, L)	Mozambique (FC, L)	South Africa (C, M)	
Congo, Dem. Rep. (FC, L)	Guinea-Bissau (FC, L)	Namibia (C, M)	South Sudan (C, L)	

Note: the letters C, FC, L, M and H imply common law and French civil law countries, low, middle and high income countries.

Table B: Pairwise Correlation

	flprt	*KOF*	*KOF*1	*KOF*2	*KOF*3	rgdp	sec_en~l	fert_rat	dem	dep_ratio
flprt	1.000									
KOF	-0.119	1.000								
*KOF*1	-0.173	0.804	1.000							
*KOF*2	-0.326	0.624	0.507	1.000						
*KOF*3	0.096	0.561	-0.050	0.045	1.000					
rgdp	-0.100	0.294	0.574	0.466	-0.168	1.000				
sec_enrol	-0.272	0.678	0.681	0.798	-0.058	0.614	1.000			
fert_rat	0.116	-0.597	-0.601	-0.779	0.002	-0.480	-0.890	1.000		
Dem	-0.112	0.440	0.400	0.380	0.125	0.106	0.558	-0.479	1.000	
dep_ratio	0.172	-0.508	-0.529	-0.668	0.016	-0.540	-0.822	0.881	-0.385	1.000

the real GDP (i.e. *rgdp*) was disclosed in its logarithm form. The other abbreviations connote - total globalisation "*KOF*"; economic globalisation "*KOF*1"; social globalisation "*KOF*2"; political globalisation "*KOF*3"; democracy "*dem*"; fertility rate "*fert_rat*"; secondary school enrolment rate "*sec_enrol"*; dependency ratio "*dep_ratio"*